

## BRITISH INSECTS\*

By T. D. A. COCKERELL

The new list of British Insects, compiled with great care, with the aid and advice of numerous specialists, is of interest to all entomologists. I find it remarkably accurate and up to date; the only serious error I have found is in the Coccidae, where the common *Orthezia insignis* has for no assignable reason got transferred to *Matsucoccus*, which it does not at all resemble. Some of the modern revisions are startling, and as in all such cases, there is a tendency to take the latest proposals as valid, though some of them may not stand the test of time. The most alarming is in *Drosophila*. What will the geneticists say to this?

*Drosophila fenestrarum* Fallén, 1823.

syn. *melanogaster* Meigen, 1830.

*Drosophila fasciata* Meigen, 1830.

syn. *cameraria* Haliday, 1833.

syn. *ampelophila* Loew, H. 1862.

syn. *melanogaster* auctt., nec Meigen, 1830.

In every case the date of publication is given; a very valuable feature. Subgenera are frequently cited, but in a good many cases names given as synonyms are really those of subgenera. The lists of synonyms are sometimes very long; for instance, the aphid *Brachycaudus helichrysi*, Kaltenbach, 1843, appears to have 23 synonyms. Ten are by Theobald, seven by Walker (three of these doubtful), five by Buckton, and one by Koch. One wonders what were the characters by which all these were supposed to be distinguished, and whether they are actually all alike.

In the case of the Lepidoptera, in particular, the specific names are cited, but the very numerous varietal names are omitted. It was obviously impracticable to list all the variations which have been described, but one of the chief problems for the British

\* A Check List of British Insects. By George Sidney Kloet and Walter Douglas Hincks. Published by the authors at Stockport, Cheshire, December 1945. 483 pages.

entomologist, as it is for the British ornithologist, is to recognize the various insular subspecies, which are far more numerous than was formerly suspected. In the present state of the nomenclature, it is not easy to separate the subspecies from the mutants, but at least some of the subspecies might have been cited.

Among the parasitic Hymenoptera, there are evidently many species to be discovered. Thus Nixon, who is a very careful and accurate worker, has in recent years described 62 new species of the Braconid genus *Dacnusa*, and we are informed that his revision is not yet completed. But the hundreds of parasitic Hymenoptera (for instance, about 128 in *Tetrastichus*) described by Walker, cannot be taken seriously, and if they are ever revised, much synonymy will result. I believe most of the specimens are in the British Museum. On account of these Walker names, the list of Hymenoptera is swollen beyond reason, but the authors are justified in citing all published names, leaving it for the future to determine their true significance.

I naturally compared the list with that of the State of New York, edited by M. D. Leonard and published in 1928. New York has 47,654 square miles; the British Islands (including Ireland) have 121,396. New York has the advantage of being in the latitude of the northern Mediterranean region, and having no sea boundary cutting it off from the regions to the south.

If we omit the spiders, centipedes and millipedes, which are listed by Leonard, New York has (or had at the time the list was published) 4,574 genera, and 15,949 species. The British Islands have 4,714 genera and 20,024 species. I thought I should find that New York had been much less investigated than the British Isles, but allowing for the difference in area, its list shows up very well in comparison.

The following groups are better represented in the British Isles than in New York:

Collembola	N. Y. 71	Brit. Is. 261
Thysanoptera	N. Y. 77	Brit. Is. 183

But in the following groups N. Y. takes the lead:

Orthoptera	N. Y. 136	Brit. Is. 38
Odonata	N. Y. 159	Brit. Is. 42
Coleoptera	N. Y. 4,546	Brit. Is. 3,690

In the Lepidoptera, the British Isles have 657 genera and 2,187 species; New York has 800 genera and 2,439 species. With the number of species not far from equal, the smaller number of British genera appears characteristic of an island fauna, where additional generic types have not arrived in great numbers, while those already present had the opportunity to expand. The Hawaiian fauna illustrates this in a striking manner. But whereas the numerous species in the Hawaiian Islands are endemic, those of the British Islands are, with few exceptions, common to the continent of Europe or only racially distinct. It must be supposed that the peculiar genera of the countries to the south could not easily establish themselves in the British Islands, or perhaps there has been a greater tendency to divide genera in America.

On comparing particular groups, the differences are striking. The British Islands have only one species of Saturniidæ; New York has eight in seven genera, but one genus and species is introduced. In the butterflies, which are well known in both regions, New York has about 114. The British Islands have 68. Britain has only one *Papilio*; New York has seven swallow-tails, arranged in three genera. *Parnassius*, though a circumpolar genus, is absent from both lists. In the Hymenopterous family Mutillidæ, the British Islands have only two species; New York has 23. In the ants, the British Islands have 36; New York has 63 species, and many subspecies.

### BOOK NOTICE

*Insect Microbiology—An Account of the Microbes Associated with Insects and Ticks with Special Reference to the Biologic Relationships Involved.* By Edward A. Steinhaus. Ithaca, New York. Comstock Publishing Company, Inc., 1946.  $9\frac{1}{2} \times 6\frac{1}{4}$  in. XIV + 763 p. 250 figs. \$7.75

I have been waiting for this book for many years, particularly within recent ones because of the presence of a protozoan in *Macrocentrus ancyliworis* and in its host, the potato tuber worm which interfered seriously with the production of *M. ancyliworis* for liberation in peach orchards infested with the Oriental fruit moth. What I needed was an adequate and general consideration of the entire field of insect microbiology, which could be